

FUTURE INVESTMENT IN DRINKING WATER AND WASTEWATER INFRASTRUCTURE

The Environmental Protection Agency (EPA) and various associations representing the nation's drinking water and wastewater systems have estimated the future costs of investment in pipes, treatment plants, storage facilities, and other water infrastructure. But making such estimates is difficult, not only because future regulatory requirements and technical progress are uncertain, but also because data on the age and condition of the existing infrastructure are scarce.

The Congressional Budget Office (CBO) has developed two estimates of average annual investment costs over the period from 2000 to 2019, on the basis of different assumptions that are intended to span the most likely outcomes. For drinking water and wastewater combined, CBO estimates that average annual costs will be \$24.6 billion in the low-cost scenario and \$41.0 billion in the high-cost scenario. Both figures are in 2001 dollars and are measured in terms of costs as financed, taking into account water systems' use of borrowing to spread out the burden on their ratepayers over time. The lower figure represents an increase of 14 percent over estimated spending in 1999; the higher figure, an increase of 90 percent. The estimate from the high-cost scenario is very similar to the one produced by the Water Infrastructure Network (WIN), when the latter is measured in comparable terms. In contrast, estimates developed by EPA and others based on system-level data rather than the national-level models used by CBO and WIN are smaller than either of CBO's estimates.

Local revenues provide the large majority of funding for water services, and one way to pay for increased costs of investment (and of operations and maintenance) would be to increase local fees and rates. Currently, household water bills in the United States are lower than those in most other industrialized countries, relative to per capita income. Even in CBO's high-cost scenario, if the projected cost increases were borne entirely by ratepayers, in 2019 water bills relative to income in the United States would remain reasonable by comparison, slightly below those in France and England today, for instance. But the increases would not affect all ratepayers equally: many households with low income or served by high-cost systems would be faced with making larger adjustments in their budgets.

The federal government provides some support for investment in water infrastructure through a variety of spending programs administered by EPA and other agencies and through tax preferences. Federal support can redistribute the costs of water services from some households to others, and water industry advocates have called for increased funding in order to keep water rates "affordable." However, current forms of support distort the price of water—undermining the incentives that consumers and suppliers have to use water and manage water systems in cost-effective ways and retarding beneficial change in the water industry. To preserve incentives for cost-effectiveness, the Congress could pursue policies that do not subsidize investment but rather redistribute income—such as formula-based aid to water systems or direct subsidies to needy households.

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